

Appl. No. 09/885,356
Supp. Amdt. Dated May 21, 2004
Reply to Examiner Interview of May 19, 2004

Amendments to the Claims:

1. (Currently Amended) A computer-implemented method of optimizing a response time for retrieving relevant documents from a set of candidate documents identified in response to a search query where the search query includes one or more terms, the method comprising the steps of:

assigning a term weight to each of the terms of the search query;

associating a document to a relevance score bin based on a total matched term weight computed for the document being based on a sum of the term weights of the terms in the search query that are matched by the document, where a document that matches a first total matched term weight is associated to a more relevant score bin than a document that matches a second total matched term weight that is less than the first total term weight; and

retrieving a set of most relevant documents based on the association to the relevance score bins having a highest relevance score without retrieving other candidate documents.

2. (Previously Presented) The method as set forth in claim 1 further including determining a relevance of a document independently from other candidate documents based on the relevance score bin associated to the document.

3. (Original) The method as set forth in claim 1 further including determining a set of most relevant documents from the candidate documents based on the relevance score bin associated to the documents without determining an exact relevance score for all the candidate documents.

4. (Original) The method as set forth in claim 1 wherein assigning the term weight to a term is based on an inverse frequency scoring.

Appl. No. 09/885,356
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5. (Original) The method as set forth in claim 1 further including:
 defining a total relevance score range; and
 defining one or more relevance score bins within the total relevance score range
as a function of a total term weight, the total term weight being a sum of the term weights
from the search query.
6. (Original) The method as set forth in claim 5 wherein the total relevance score range
is divided into the one or more relevance score bins each having an equal size.
7. (Currently Amended) A computer readable medium having computer executable
instructions for performing a method for optimizing a response time for retrieving
relevant documents from a set of candidate documents identified in response to a search
query where the search query includes one or more terms, the method comprising the
steps of:
 assigning a term weight to each of the terms of the search query;
 associating a document to a relevance score bin based on a total matched term
weight where a document that matches a first total term weight is associated to a more
relevant score bin than a document that matches a second total term weight that is less
than the first total term weight; and
 retrieving a set of most relevant documents based on the association to the
relevance score bins having a highest relevance score without retrieving other candidate
documents.
8. (Currently Amended) An object retrieval system comprising:
 a logic for processing a search query having one or more terms;
 an object retrieval logic for identifying candidate objects that match the search
query;
 a ranking logic for assigning a term weight to each of the terms of the search
query and associating each combination of matched term weights to a relevance score

Appl. No. 09/885,356
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range, the ranking logic grouping the candidate objects based on the total matched term weight where an object that matches a first total term weight is associated to a more relevant score range than an object that matches a second total term weight that is less than the first total term weight; and

a retrieval logic for retrieving a set of relevant objects associated to the relevance score ranges having a greatest total matched term weight without retrieving the candidate objects from other relevance score ranges.

9. (Currently Amended) The object retrieval system of claim 8 wherein the logic for processing the search query includes a parser that parses the search query to identify the terms.

10. (Original) The object retrieval system of claim 8 wherein the ranking logic includes:
logic for defining a total relevance score range; and
logic for defining the relevance score ranges within the total relevance score range as a function of possible term weights that an object can match.

11. (Original) The object retrieval system of claim 8 wherein the retrieval logic includes logic for retrieving only objects from the candidate objects that match a highest value of the term weights.

12. (Previously Presented) The object retrieval system of claim 8 wherein the ranking logic includes means for associating document relevance scores to the relevance ranges based on matched term weight.

13. (Currently Amended) A computer-implemented method of retrieving most relevant documents from a set of candidate documents that match a search query having one or more terms, the method comprising:

assigning a term weight to each of the terms in the search query;

Appl. No. 09/885,356
Supp. Amdt. Dated May 21, 2004
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defining a total relevance score range and a plurality of score bins therein;
establishing a relationship between a total term weight matched by a document
and a score bin within the total relevance score range;
associating a score bin to a document based on the total term weight matched by
the document; and
retrieving the most relevant documents based on the score bins.

14. (Original) The method as set forth in claim 13 wherein associating includes
associating a score bin to a document such that a final relevance score of the document is
limited to the score bin and the most relevant documents are identifiable without having
to determine a final relevance score for all the candidate documents.

15. (Original) The method as set forth in claim 13 wherein retrieving the most relevant
documents includes retrieving documents that match a highest term weight associated to
a highest score bin without retrieving documents associated to other score bins.

16. (Previously Presented) The method as set forth in claim 13 wherein a score bin is
associated to a document such that a document that matches a first total term weight is
associated to a more relevant score bin than a document that matches a second total term
weight that is less than the first total term weight.

17. (Original) The method as set forth in claim 13 wherein the assigning a term weight is
based on an inverse frequency scoring.

18. (Original) The method as set forth in claim 13 wherein the associating allows the
most relevant documents to be identified independently from the other candidate
documents.

Appl. No. 09/885,356
Supp. Amdt. Dated May 21, 2004
Reply to Examiner Interview of May 19, 2004

19. (Original) The method as set forth in claim 13 further including displaying the most relevant documents to a user.

20. (Previously Presented) A computer readable medium having computer executable instructions for performing a method for retrieving most relevant documents from a set of candidate documents that match a search query having one or more terms, the method comprising:

- assigning a term weight to each of the terms;
- defining a total relevance score range and a plurality of score bins therein;
- establishing a relationship between a total term weight matched by a document and a score bin within the total relevance score range;
- associating a score bin to a document based on the total term weight matched by the document; and
- retrieving the most relevant documents based on the score bins.

21. (NEW) A computer-implemented method of optimizing a response time for retrieving relevant documents from a set of candidate documents identified in response to a search query where the search query includes one or more terms, the method comprising:

- assigning a term weight to each of the terms in the search query;
- computing a total matched term weight for a document by matching the terms in the search query to terms associated with the document and summing the term weights of the terms in the search query that match the terms associated with the document, where the terms associated with the document are stored in an index;
- associating the document with a relevance score bin based on a total matched term weight, where a first document with a first total term weight in a first relevance range is associated with a first score bin associated with more relevant documents than a second document with a second total term weight in a second relevance range; and

Appl. N . 09/885,356
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selectively retrieving a subset of a set of documents, where the subset includes documents associated with one or more relevance score bins.

22. (NEW) The method of claim 21, where the relevance range is computed dynamically based, at least in part, on the sum of the term weights from the search query.

23. (NEW) The method of claim 21, where the relevance range is computed dynamically based on the sum of the term weights from the search query divided by a greatest common denominator of the term weights.